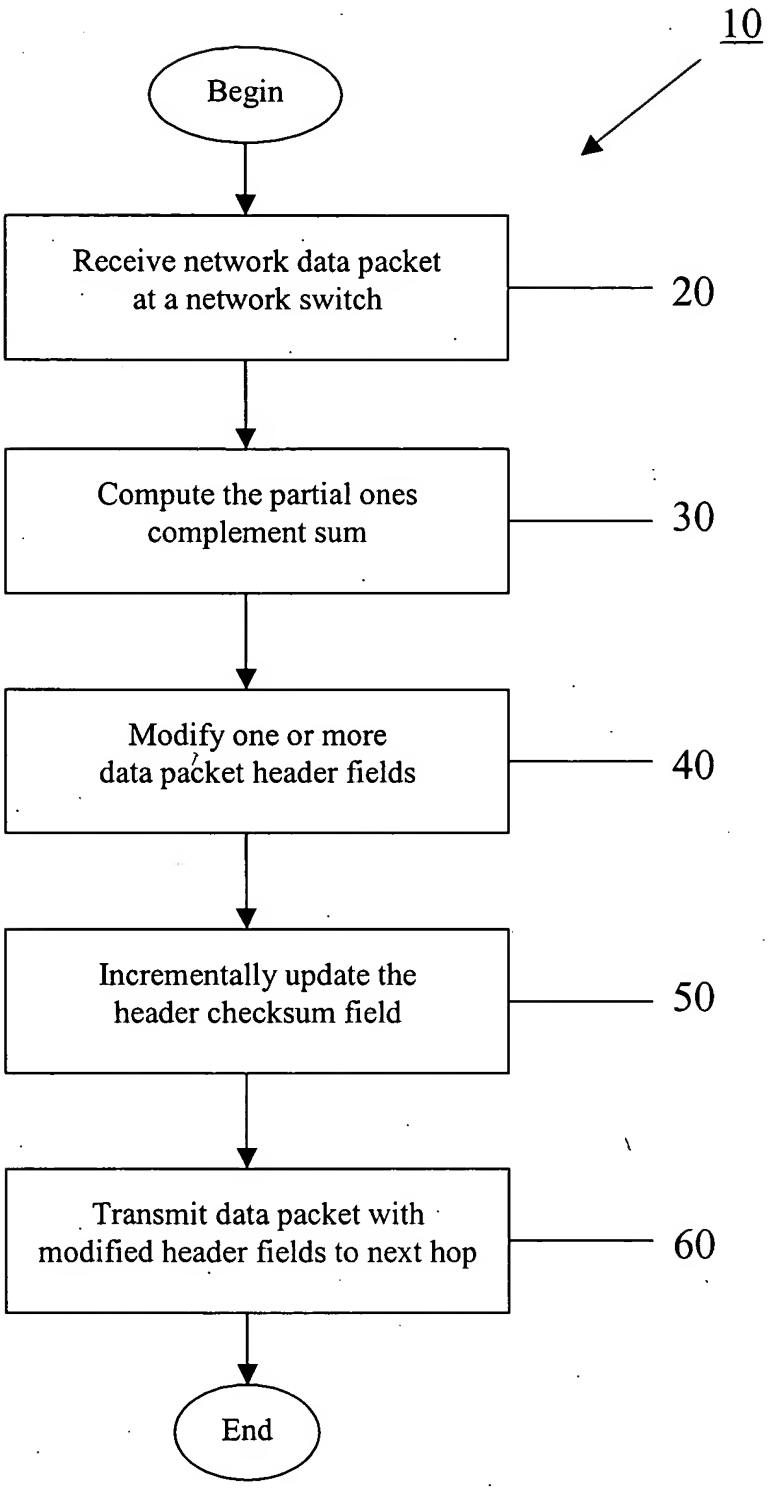
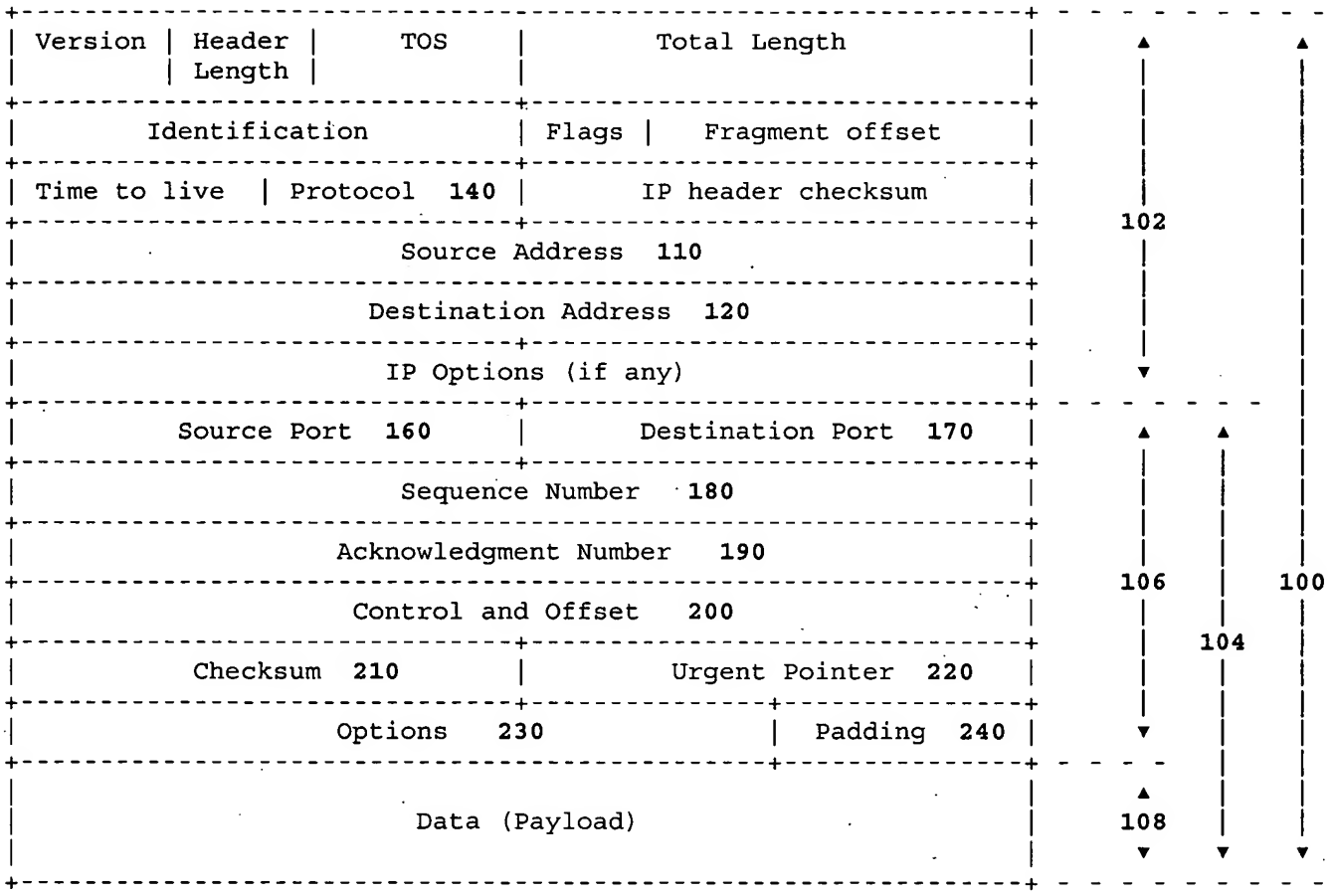
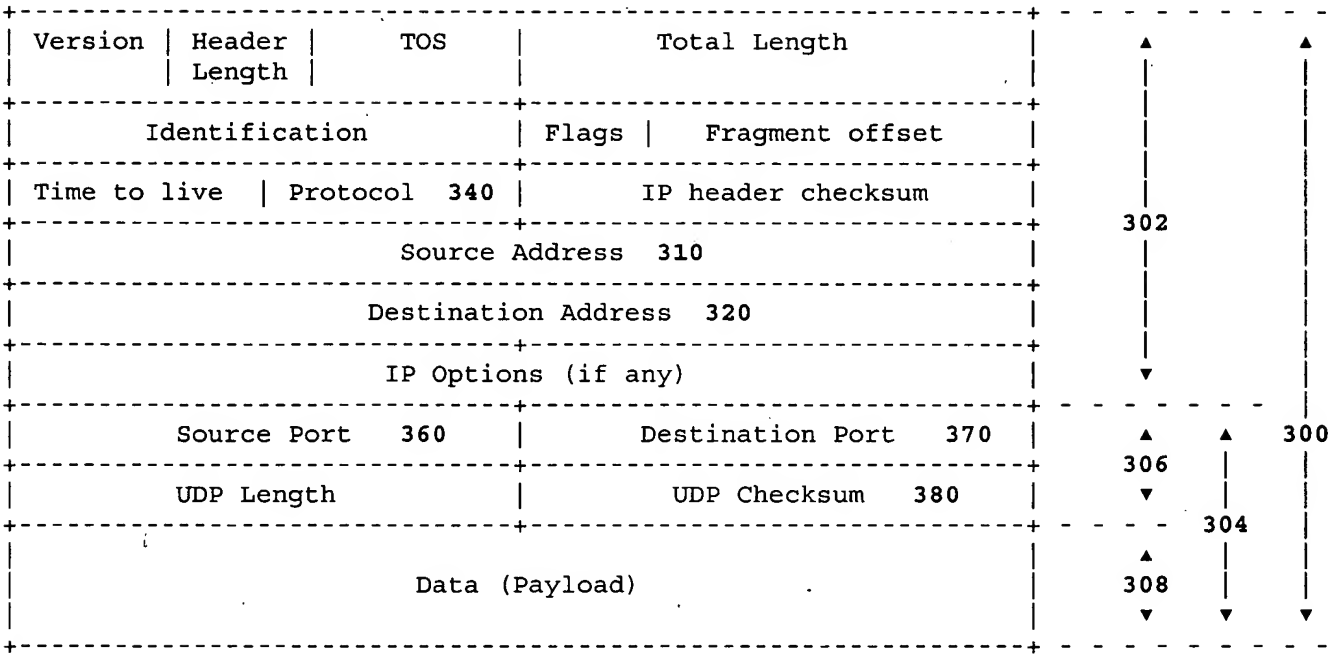

10
Begin
Receive network data packet at a network switch
20
Compute the partial ones complement sum
30
Modify one or more data packet header fields
40
Incrementally update the header checksum field
50
Transmit data packet with modified header fields to next hop
60
End

FIG. 1



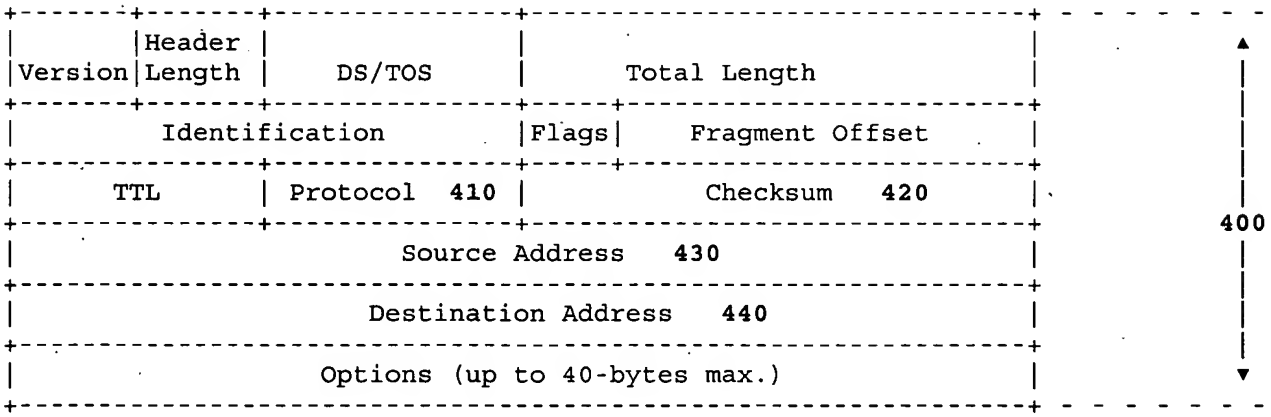
Encapsulation of a TCP segment as an IP datagram (PRIOR ART)

FIG. 2



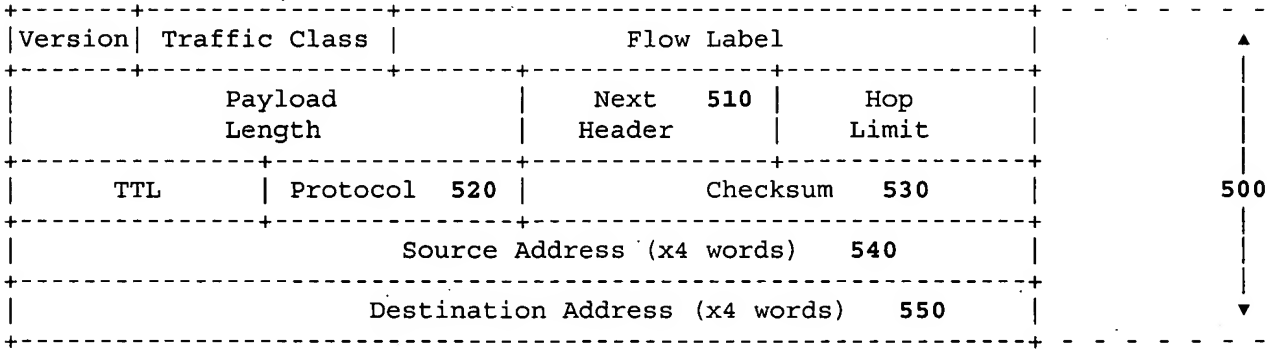
Encapsulation of a UDP segment as an IP datagram (PRIOR ART)

FIG. 3



IPv4 Header
(PRIOR ART)

FIG. 4



IPv6 Header
(PRIOR ART)

FIG. 5

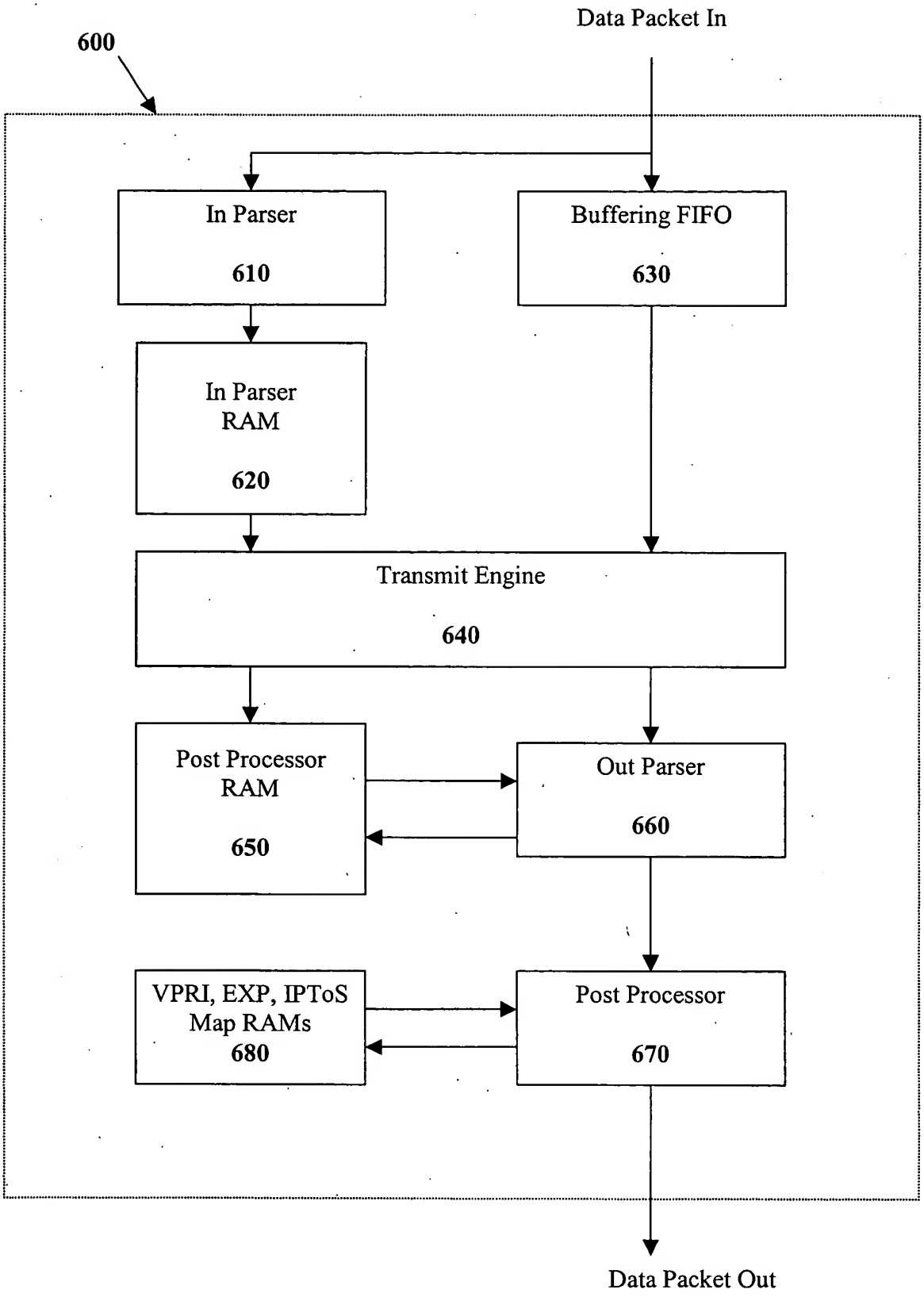

600
Data Packet In
In Parser
610
Buffering FIFO
630
In Parser
RAM
620
Transmit Engine
640
Post Processor
RAM
650
Out Parser
660
VPRI, EXP, IPToS
Map RAMs
680
Post Processor
670
Data Packet Out

FIG. 6